Delivery Point Validation Product
Licensed Service

1.0 GENERAL

There are 145 million confirmed mail delivery points in the United States today. Delivery Point Validation System (DPV) is one product of the SnappCheck Address Management Technologies™ tools that identifies whether a ZIP+4 coded address is currently represented in the USPS delivery point file as a valid delivery point. A CASS-certified ZIP+4 address-matching product matches and standardizes addresses within a range of valid addresses. Incorporating DPV with your ZIP+4 system takes it one step further and validates the coded address as a confirmed USPS delivery point. Utilization of DPV allows users to confirm valid deliverable addresses as well as identify potential addressing issues that may cause problems with delivery. Correcting potential addressing issues can reduce the amount of undeliverable-as-addressed (UAA) pieces, which in turn will result in more efficient mail processing and delivery.

2.0 PURPOSE

2.1 The purpose of these performance requirements is to enhance the processing and delivery of mail and provide mutual cost reduction opportunities through improved efficiency by ensuring USPS customers have access to the following address list services:

- Acceptable standardization and address matching services
- Detection of undeliverable addresses (excluding change of address)
- Delivery Point validation information for existing addresses in the mailer's file

2.2 Another purpose of these performance requirements is to establish standard criteria of performance and compliance by DPV Licensees.

2.3 The DPV Licensee's matching software must adhere to specific USPS directions regarding the services as well as to the matching rules and specifications herein. Licensees must obtain Coding Accuracy Support System (CASS) certification for ZIP+4 processing prior to DPV licensing. In addition, Licensees will be tested on a periodic basis using a test address file similar to CASS. CASS is an existing USPS certification process available to all commercial firms.

2.4 The Licensee is responsible for providing all necessary interface software.

3.0 PRODUCT DESCRIPTION

3.1 DPV utilizes what are referred to as hash tables, or binary data tables that include representations of known addresses and address attributes. The hash tables are secure data sets that will only provide a yes or no answer, (e.g. Does USPS deliver mail to 123 Main St?). No new information is provided from the use of the DPV data, (e.g. Who lives at 123 Main St?).

3.2 Although the DPV datasets appear quite simple, extensive programming is required to interface with ZIP+4 matching software. The interface must be written to customize the type of input format and the output desired, and link with ZIP+4 matching software.

3.3 Monthly updates to the DPV data sets (hash tables) will be provided via CD to Licensees. Licensees will synchronize the CASS ZIP+4 product with the DPV updates to provide the best up-to-date addresses.

3.4 All requirements and specifications contained within the License Agreement, the most current version of this document, and the most current version of the Interface Developers Guide shall apply to the use of the DPV process unless explicitly allowed, prohibited, or modified by USPS in writing.

4.0 DEFINITION

The DPV process is a series of inquiries to USPS secure hash tables that validates the accuracy and completeness of an input address. Input is in the form of a 9-digit ZIP+4 Code and a parsed address. Output is in the form of Yes (delivery point is confirmed) or No (delivery point not confirmed). A secondary table is provided to ascertain if the address belongs to a Commercial Mail Receiving Agency (CMRA). No address or name information is returned.

5.0 GENERAL REQUIREMENTS

5.1 A Licensee or software developer writing an interface to the DPV system hash tables must first ensure the address list is processed through USPS CASS-certified software to obtain a 9-digit ZIP Code and a parsed address immediately prior to the validation process. The DPV process only validates delivery points; it cannot assign a ZIP+4 Code nor will it respond to a non-ZIP+4 coded address. The Licensee is expected to maintain the current performance standard required for CASS certification as defined within the most current CASS cycle. The interface must be reviewed, tested, and approved by USPS prior to any actual DPV processing occurring in a production environment to ensure all license requirements are met. After review, USPS will provide the Licensee with written approval or rejection of the proposed interface system.

5.2 DPV product fulfillment will be made directly to the Licensee. Licensees must organize redistribution to synchronize DPV with their CASS ZIP+4 product.

5.3 The Licensee shall not export the DPV product outside the boundaries of the United States of America or its territories without prior written approval of USPS.

5.4 In conjunction with services to be performed as a Licensee of USPS, the Licensee agrees that any and all data, source code, or information received from USPS or otherwise obtained or developed in the course of, or as the result of, the performance of such services shall:

5.4.1 Be kept in strict confidence and shall not be disclosed in any manner to any organization (including professional societies) other than USPS until released of such obligation by the contracting officer in writing, and,

5.4.2 When in the Licensee's possession, be provided with adequate physical, technical and administrative safeguards to prevent unauthorized access, disclosure, misuse, or attention.

5.5 Customer education shall be the Licensee's responsibility. The Licensee will ensure its customers understand the DPV process and interface. The Licensee must provide a DPV product brochure to each customer who wishes to subscribe. The brochure must explain the product in detail and be approved by USPS. Licensee's customers requiring technical information must contact a customer service group managed by the Licensee.

5.6 Copies of this document and any new updates to the License Agreement, the Performance Requirements, or the Certification Procedures will be posted on the RIBBS website at http://ribbs.usps.gov/files/dpv

6.0 SPECIFIC REQUIREMENTS

6.1 The DPV product shall not be used to facilitate creation of address lists artificially. To detect conditions when address records appear to be the result of artificial manufacture and not legitimately obtained addresses, a seed table of artificially manufactured addresses is provided as part of DPV. These seed addresses reside in the False Positive table. For each negative response that occurs in a query of the DPV hash table (Table A), a query must be made to the False Positive table (Table F). The Licensee shall design a Stop DPV Processing function that will cause their interface to cease delivery point validating addresses when the interface encounters a list containing an apparent artificial address (the process can continue ZIP+4 encoding). Anytime an address encounters a hit in the False (hsf) table, the DPV validation function shall be halted immediately.

6.2 When a customer encounters the Stop DPV Processing function, the Licensee must be notified in order to restore DPV processing capability. The Licensee shall inform the customer that the processing was halted due to an unauthorized exposure to an apparent artificially created address. The Licensee shall immediately notify USPS of the customer's name and address. The Licensee shall design a unique one time only, restart code to restore DPV processing capability (i.e. cannot be used after the first occurrence to bypass any further Stop DPV Processing error codes). USPS reserves the right to require a Licensee to suspend a customer's ability to perform DPV processing when multiple incidents of artificial address detection occur.

6.2.1 The following statement regarding the Stop DPV Processing function shall be placed in all documentation provided to the customer. The error code definition shall read: "DPV processing was terminated due to the detection of what is determined to be an artificially created address. No address beyond this point has been DPV validated. In accordance with the License Agreement between USPS and X vendor, DPV shall be used to validate legitimately obtained addresses only, and shall not be used for the purpose of artificially creating address lists. The written Agreement between X vendor and Y customer shall also include this same restriction against using DPV to artificially create address lists. Continuing use of DPV requires compliance with all terms of the License Agreement. If you believe this address was identified in error, please contact X vendor."

6.3 Licensees shall encapsulate the DPV product as received from USPS into a secure form subject to approval by USPS. Licensees must ensure the DPV-integrated product is released in the secure form that will only allow interaction with authorized CASS software. The Licensee's DPV-integrated product in its secure form shall render the DPV data unusable to unauthorized access by customers, other software developers, or independent use. Any sublicense of the Licensee's DPV-integrated product in its secure form must retain all elements of the secure form as provided by Licensee in any subsequent distribution or product provided by or under the sublicense agreement.

6.4 Licensees will synchronize the release of their CASS-certified ZIP+4 product and the DPV product with the same release dates. This will ensure validation is performed utilizing matched ZIP+4 and DPV release data.

6.5 Licensees will design a stop processing code that will cause the DPV product interface to stop working when the DPV data has aged more than 105 days from the product date.

6.6 Per Paragraph 11.3 in the License Agreement, DPV shall not be used to facilitate the artificial creation of address lists. To detect conditions when address records appear to be the result of artificial manufacture and not legitimately obtained addresses, a seed table of artificially manufactured addresses is provided as part of the DPV System. These seed addresses reside in the False Positive table. For each negative response that occurs in a query of the DPV hash table (Table A), a query must be made to the False Positive table. Anytime an address encounters a hit in the False (hsf) table, the DPV validation function shall be halted immediately (the process can continue ZIP+4 encoding). The Licensee shall immediately notify USPS of the customer's name and address (using the file layout below). The Licensee must transfer a file containing the affected addresses from each address list to **Dsf2stop@email.usps.gov**

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DPV FALSE POSITIVE HEADER RECORD

FIELD REFERENCE NUMBERS	FIELD DESCRIPTION	LOGICAL LENGTH	RELATIVE POSITION FROM/THRU	CONTENT NOTES
1	MAILER'S COMPANY NAME	40	01 - 40	
2	MAILER'S ADDRESS LINE	58	41 - 98	
3	MAILER'S CITY NAME	28	99 - 126	
4	MAILER'S STATE NAME	02	127 - 128	
5	MAILER'S 9DIGIT ZIP	09	129 - 137	
6	TOTAL RECORDS PROCESSED	09	138 - 146	
7	TOTAL RECORDS DPV MATCHED	09	147 - 155	
8	% MATCH RATE TO DPV	09	156 - 164	
9	% MATCH RATE TO ZIP+4	09	165 - 173	
10	NUMBER OF ZIP CODES ON FILE	05	174 - 178	
11	NUMBER OF FALSE POSITIVES	02	179 - 180	

DPV FALSE POSITIVE RECORD

FIELD REFERENCE NUMBERS	FIELD DESCRIPTION	LOGICAL LENGTH	RELATIVE POSITION FROM/THRU	CONTENT NOTES
1	STREET PRE-DIRECTIONAL	02	01 - 02	
2	STREET NAME	28	03 - 30	
3	STREET SUFFIX ABBR	04	31 - 34	
4	STREET POST-DIRECTIONAL	02	35 - 36	
5	ADDRESS PRIMARY NUMBER	10	37 - 46	
6	ADDRESS SECONDARY ABBR	04	47 - 50	
7	ADDRESS SECONDARY NUMBER	08	51 - 58	
8	MATCHED ZIP CODE	05	59 - 63	
9	MATCHED PLUS 4	04	64 - 67	
10	FILLER	113	68 - 180	

Reference numbers 1 through 7 are from the input address.
References numbers 8 and 9 are from the matched records.

7.0 QUALITY STANDARDS AND TESTING CRITERIA

7.1 The DPV product is subject to periodic audit and evaluation of the organization's DPV process to ensure adherence to the conditions of the DPV License Agreement. The USPS audit file must be processed through the same DPV system utilized for customer processing.

7.2 DPV validates the deliverability of an address when a 9-digit ZIP+4 code and a parsed address are presented through the specified algorithm.

7.3 USPS will test the Licensee's interface with a series of known and unknown delivery points to validate the interface's ability to query the DPV secure hash tables.

7.4 The test will also verify the gatekeeping functionality of the interface.

7.5 This testing will be performed annually or when significant changes occur in the interface software.

7.6 Upon validation of the results of the output test client file at the NCSC, the Licensee will receive official notification of the audit results from USPS NCSC.

7.7 Applicants will be evaluated for accuracy of CASS assignments. For each test address correctly ZIP+4 encoded by their CASS process, the applicants must correctly answer and provide all DPV elements with 100% accuracy.

8.0 BASIC DPV PRODUCT OUTPUT

8.1 Standardized footnotes have been established to provide consistency of products and facilitate USPS evaluation of customer data.

8.2 For each address submitted by a customer, the Licensee must be able to return the following output on the medium specified by the customer:

8.2.1 Each original mailing address as it was presented

8.2.2 The standardized address appended with the correct ZIP+4/DPC, other postal values as may be requested by the customer, and any other intelligence flags or footnotes that result from the CASS processing segment.

8.2.3 For each mailing address for which there is a match to the DPV hash table(s) as defined in this document, the Licensee shall be capable of providing each of the standard footnote codes as listed in Figure 1. The Licensee shall assign all applicable standard footnote codes.

8.2.4 For each mailing address for which there is not a match to the DPV hash table, the Licensee shall return all elements as appropriate under paragraph 8.2.2 as well as any standard footnote codes that may be appropriate under Figure 1.

8.3 In the event that a problem is identified by USPS that is related to the DPV process, USPS will, at its sole discretion, direct correction of the problem and/or exercise the suspension or termination provisions of the license, as it deems appropriate by the situation.

9.0 LICENSEE SELECTION AND CERTIFICATION

See Certification Procedures

Figure 1
Footnotes:

The following standard footnotes shall be provided to customers upon their request:

AA Input Address Matched to the ZIP+4 file
A1 Input Address Not Matched to the ZIP+4 file
BB Input Address Matched to DPV (all components)
CC Input Address Primary Number Matched to DPV but Secondary Number not Matched (present but invalid)
N1 Input Address Primary Number Matched to DPV but Address Missing Secondary Number
M1 Input Address Primary Number Missing
M3 Input Address Primary Number Invalid
P1 Input Address RR or HC Box number Missing
P3 Input Address PO, RR, or HC Box number Invalid
RR Input Address Matched to CMRA and PMB designator present (PMB 123 or #123)
R1 Input Address Matched to CMRA but PMB designator not present (PMB 123 or #123)

New footnotes will be in effect August 2005.

F1 Input Address Matched to a Military Address
G1 Input Address Matched to a General Delivery Address
U1 Input Address Matched to a Unique ZIP Code

On the new footnotes of F1, G1 and U1 move “Y” to the DPV return code and spaces to all other flags.